CASE REPORT

Rash after treatment with anistreplase

Nigel Burrows, Robin Russell Jones

Abstract

A palpable purpura developed on the legs and lower abdomen of a woman of 54 five days after she was treated with anistreplase anisoylated plasminogen streptokinase activator complex (APSAC) for an acute myocardial infarction. Histological examination of a skin biopsy specimen taken 6 days after treatment showed leucocytoclastic vasculitis. The rash resolved within two weeks and there were no other complications.

An illness resembling serum sickness and presenting with pyrexia, peripheral oedema, arthritis/arthralgia, and rash can complicate treatment with streptokinase.[1–3] We report the development of a rash as the sole complication of treatment with anistreplase (anisoylated plasminogen streptokinase activator complex (APSAC)).

Case report

A 54 year old Asian woman presented with a 6 hour history of central chest pain radiating down the left arm. She had non-insulin dependent diabetes and hypertension that were well controlled by treatment with metformin (1 g twice a day), atenolol (100 mg once a day), and aspirin (100 mg daily). There had been no recent change to her medication. An electrocardiogram at presentation confirmed an acute myocardial infarction with considerable ST elevation in the inferior leads. She was treated with 30 units of anistreplase, without heparin, by slow intravenous injection.

She made an uneventful recovery until 5 days after anistreplase treatment when a palpable, purpuric rash developed mainly on the extensor aspect of her legs and extended to the lower trunk. Plasma urea, serum creatinine, a full blood count, and clotting studies were normal. Urine microscopy was negative. Tests for antinuclear factor, antibody to extractable nuclear antigen, rheumatoid factor, Australia antigen, and cryoglobulins were also negative. A biopsy specimen of lesional skin (figure), obtained on day six, showed a mixed perivascular inflammatory cell infiltrate, red cell extravasation, fibrinoid necrosis of the dermal blood vessels, and fragmentation of neutrophils (leucocytoclasia). Staining by direct immunofluorescence showed C3 and IgM around the blood vessels. These findings were consistent with an acute leucocytoclastic vasculitis.

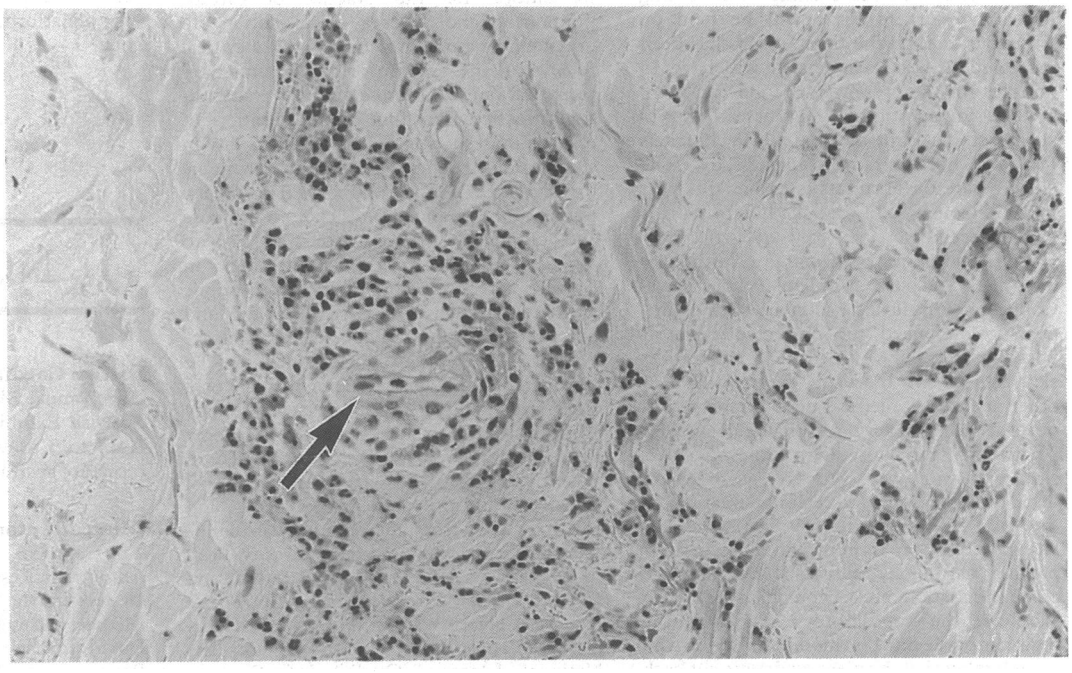

Figure A skin biopsy specimen taken 6 days after anistreplase. It shows leucocytoclastic vasculitis with a prominent number of neutrophils in the inflammatory infiltrate surrounding a venule (arrow).

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Discussion

The cutaneous manifestations of drug induced vasculitis are often associated with more serious systemic complications. In our patient, as with other reported cases,[4] the course was benign and the rash resolved within two weeks. A review of recent trials of anistreplase failed to mention purpuric rashes,[5] though this complication was found in 0·8% of patients receiving anistreplase.[6]

1 Alexopoulos D, Raine AEG, Cobbe SM. Serum sickness complicating intravenous streptokinase therapy in acute myocardial infarction. *Eur Heart J* 1984;5:1010–2.
2 Noel J, Rosenbaum LH, Gangadharan V, Stewart J, Galens G. Serum sickness-like illness and leukocytoclastic vasculitis following intracoronary arterial streptokinase. *Am Heart J* 1987;113:395–7.
3 Tott WG, Romano T, Benian GW, Gilula LA, Sherman LA. Serum sickness following streptokinase therapy. *AJR* 1982;138:143–4.
4 Bucknall C, Darley C, Flax J, Vincent R, Chamberlain D. Vasculitis complicating treatment with intravenous anisoylated plasminogen streptokinase activator complex in acute myocardial infarction. *Br Heart J* 1988;59:9–11.
5 Anonymous. Alteplase and anistreplase in acute myocardial infarction. *Drug Ther Bull* 1989;27:101–2.
6 Harrison I. Anistreplase questions answered. *Br J Pharm Practice* 1989;11:361.

BRITISH CARDIAC SOCIETY NEWSLETTER

Members will soon be receiving a mailing shot concerning the Glasgow meeting. Preparations are now well under way. Accommodation has been reserved at a range of prices, but early booking is advisable. The main conference hotel adjoins the conference centre. Glasgow has worked hard to justify its claim to be the cultural centre of Europe. Members of the society may not (indeed should not . . .) have time to make an informed judgment on this claim during the course of the meeting, but we believe that the city will prove to be another popular venue. The format of the meeting will be very similar to that adopted in Torquay, with the first half day allocated to the working groups (Tuesday 30 April), followed by three days of the main meeting (Wednesday 1 May to Friday 3 May). On each day of the main meeting there will be plenary sessions in the morning and a named lecture in the evening. The Young Research Workers Prize will be held on Thursday 2 May: the time for this has been increased so that each finalist will have 15 minutes for the presentation followed by 10 minutes for questions. The Nurses Day will also be on the Thursday and the Technicians Day has been arranged for Friday. The closing date for abstracts is earlier this year than previously, and we have had to set this for 10 December.

The new training programme in cardiology continues to pose problems. The Royal College of Physicians has given strong support to our need for protected registrar posts—essential if we are to plan training over six years in two blocks of three years. But other specialties feel the need for protected posts as well, a very reasonable viewpoint particularly for those with training needs similar to our own. The college therefore decided to make general recommendations to the Joint Planning Advisory Committee relating to registrar training, rather than supporting cardiology alone. If the College recommendations are accepted, as surely they should be, the proposals for restructuring the registrar grade must be modified. It is as well to remember that the planned drastic cut back in registrar posts was to be introduced over a period of 10 years. Some regions seem hell-bent on making the changes almost immediately. Less enthusiasm would be expected if expansion rather than contraction were being proposed.

Members of the British Cardiac Society should know of the formation of a European Resuscitation Council. The idea was born of a frustrated attempt to form a working group on resuscitation within the European Society of Cardiology—rejected by the General Assembly in Dusseldorf. A group of cardiologists, with the United Kingdom well represented, met at the Vienna congress and decided that an organisation dedicated to resuscitation should be multidisciplinary if it were to be widely successful. The Resuscitation Council of the United Kingdom was a useful model. The idea was well accepted, and plans moved ahead rapidly. An ad hoc meeting of interested individuals from several European countries took place in Antwerp in December 1988, and a provisional organisation was set up. The European Resuscitation Council was created formally in August 1989, and the first General Assembly of the Council was held in June 1990. The primary objective of the Council is "to preserve life by improving standards of resuscitation in Europe and to co-ordinate the activities of European organisations with a major interest in Cardiopulmonary Resuscitation (CPR)." The secondary objectives are "to produce guidelines and recommendations appropriate to Europe for the practice of cardiopulmonary and cerebral resuscitation; to update these guidelines in the light of critical reviews of the practice of cardiopulmonary resuscitation; to promote audit of resuscitation practice including standardisation of records of resuscitation attempts; to design standardised teaching programmes suitable for all trainees in Europe ranging from the lay public to the qualified physician; to promote and co-ordinate appropriate research; to organise relevant scientific meetings in Europe; and to promote political and public awareness of resuscitation requirements and practice in Europe." The societies that are represented on the council include: the European Society of Cardiology, the World Federation of Societies of Anaesthesiology (European Section), the European Academy of Anaesthesiology, the European Society of Intensive Care Medicine, and national societies of cardiology, anaesthesia, and intensive care from many European countries. Informal contacts have already been made between the European Resuscitation Council and representatives from the American Heart Association National Emergency Cardiac Care Committee and the National Advanced Cardiac Life Support Subcommittee. An early meeting between the European Resuscitation Council and representatives of these two organisations is likely to take place in Norway at the end of the year to discuss uniform guidelines for reporting performance and outcome data in relation to cardiac arrest in hospital and out of hospital. Colleagues from Canada and Australia may also attend.

Harmonisation is the jargon word of the 90s, and the pursuit of uniformity threatens to become an end in itself. But the objectives here are sound, and progress is assured. The President represents the British Cardiac Society on the European Resuscitation Council. He is a member of the Executive Committee and will attend the Norwegian meeting. The Officers of the European Resuscitation Council are: Chairman, Dr Peter Baskett (anaesthetist, UK); Vice Chairman, Dr Stig Holmberg (cardiologist, Sweden); Secretary, Professor Leo Bossaert (cardiologist, Belgium); Treasurer, Professor Daniel Scheidegger (anaesthetist, Switzerland). The Secretariat of the Council is located in Antwerp. The address is: European Resuscitation Council Secretariat, c/o Professor L Bossaert, University of Antwerp—UIA, Universiteitsplein 1, B2610 Antwerp, Belgium.

We end this letter with another request: that members of the society should consider using this page in the journal to put forward news and ideas, criticisms, and comments. We have heard it said that members have too little voice in the affairs of the society. We offer a platform, but where have the speakers gone?

DOUGLAS CHAMBERLAIN
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NOTICES

British Cardiac Society

The Annual Meeting will take place at the Scottish Exhibition Centre, Glasgow on 30 April to 3 May 1991. The closing date for receipt of abstracts will be 10 December 1989.

Clinical Autonomic Research Society

The Annual Meeting of the Clinical Autonomic Research Society will be held on 16 November 1990 at St Mary's Hospital Medical School, London. Inquiries to Dr David Jordan, Department of Physiology, Royal Free Hospital Medical School, Rowland Hill Street, London NW3 2PF. Telephone (071) 794 0500, extension 4304.